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ORCHID STUDIES, II

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THE FOLLOWING SPECIES of *Dendrobium* have been found in a collection of about two hundred specimens awaiting determination. These species were collected in the Philippine Islands.

The subgenera outlined by Kränzlin in his monograph of *Dendrobium* are used here in preference to the more complicated system proposed by Schlechter in his "Die Orchideen von Deutsch-Neu-Guinea." The latter system was followed by Ames in his first comprehensive account of the Philippine Orchidaceae (Orchidaceae 5 (1915) 106-113). One of the species described below, which would belong to the genus *Desmotrichum* if Kränzlin's treatment were followed, is referred to *Dendrobium*.

Dendrobium (Subg. Grastidium § Conostalix) **nemorale** *L. O. Williams, n. sp.*

Herba epiphytica, caulibus usque ad 3 dm. longis; caules pluriarticulati, incrassati; folia lanceolata, acuta, apice inconspicue bilobata, subtus sparse nigro-pubescentia; inflorescentia brevis, uni- vel biflora; sepalum dorsale lanceolatum, acutum; sepala lateralia similia; petala late lanceolata, acuta vel obtusa, paulo obliqua et raro obscure denticulata; labellum trilobatum, lobi laterales prominentes, paulo divergentes, obtusi, lobo medio transverse ovali; columna generis.

An epiphytic herb with stems up to 3 dm. long. Stems multiarticulate, thickened, the segments 0.5–2.5 cm. long, decreasing in length upward, the old leaf-sheaths remaining for a long time; leaves lanceolate, acute, thin, 3–5-nerved, unequally bilobed at the apex, glabrous above, glabrous or sparingly black-pubescent below, 25–45 mm. long, 5–9 mm. broad, articulated to the striated black-pubescent sheaths which become glabrous with age; inflorescence short, probably only 1- or 2-flowered; flowers about 15 mm. long, probably white or ivory-colored; dorsal sepal lanceolate, acute, about 10 mm. long and 4 mm. broad; lateral sepals attached mainly to the column-foot, blade about 10 mm. long and 4 mm. broad,—forming a short scrotiform mentum at the base which is about 4 mm. long; petals broadly oblanceolate, obtuse or acute, slightly oblique and often obscurely denticulate, about 10 mm. long and 4 mm. broad near the apex; lip 3-lobed, about 12 mm. long and 10 mm. broad from the tips of the lateral lobes,—lateral lobes prominent, slightly divergent, obtuse, about 8 mm. long,—middle lobe transversely oval, about 4 mm. long and 10 mm. broad; column about 3 mm. long, the stelidia erect, about 1 mm. long.

LUZON: Montalban, Province of Rizal, April 1912, *Loher s.n.* (TYPE in Herb. Ames No. 44750).

Dendrobium nemorale is not closely allied to any of the other species of the subgenus or section known to me.

Dendrobium (Subg. Pedilonum) **crassimarginatum** *L. O. Williams, n. sp.*

Herba epiphytica caulibus usque ad 3 dm. longis. Folia lanceolata, acuta, cum quinque nervis; inflorescentia plerumque biflora, prope caulis medium; flores parvi, albi; sepalum dorsale lanceolatum, acutum; se-

pala lateralia lanceolata, obtusa vel acuta, paulo obliqua; petala elliptica, acuta vel obtusa; labellum simplex, ellipticum, basi unguiculatum, margine incrassato; columna generis.

An epiphytic herb with simple or branched stems up to 3 dm. long. Stems multiarticulate, indurated but not greatly thickened, the segments mostly 1–1.5 cm. long, the older ones with the shredded remains of the old leaf-sheaths, yellow in color, the younger parts of the stem covered with the loose leaf-sheaths; leaves lanceolate, acute, mostly with five main nerves, 3–4 cm. long, 7–9 mm. broad (as far as known), articulated to the striated sheaths; inflorescence usually 2-flowered, borne at or near the end of the stem; flowers rather small, white, about 1.5 cm. long; dorsal sepal lanceolate, acute, 5-nerved, joined with the lateral sepals for a short distance at the base, about 10 mm. long and 4 mm. broad; lateral sepals attached to the column-foot, lanceolate, obtuse or acutish, slightly oblique, 5-nerved, blade about 10 mm. long and 4 mm. broad, prolonged into a mentum which is closed for only about 3 mm., the mentum (and column-foot) about 6 mm. long; petals elliptic, acute or obtuse, 3-nerved, about 10 mm. long and 4.5 mm. broad; lip simple, elliptic, attenuated into a claw at the base, the lateral margins of the blade thickened and toothed or scalloped, about 14 mm. long including the claw and about 6 mm. broad; column short, about 2 mm. long, stelidia erect, lanceolate.

LEYTE: epiphyte in forest, Jaro, Masaganap, flowers white, alt. 600 m., Nov. 23, 1914, *Wenzel 706*; epiphyte in forest, Jaro, Conpagal, flowers white, alt. 800 m., Nov. 25, 1914, *Wenzel 748* (TYPE in Herb. Ames No. 44697).

I have been unable to discover close allies for this species, either in the Philippines or elsewhere. The pe-

culiar thickening on the margins of the lip makes it easily recognizable.

The bi-flowered inflorescence might cause it to be confused with species of the Subg. Grastidium. All of the other characters however, would indicate that it belongs to the Subg. Pedilonum.

Dendrobium (Subg. Pedilonum) **diffusum** *L. O. Williams, n. sp.*

Herba epiphytica cum caulibus pluribus basilaribus. Caules ramosi, multiarticulati; folia lanceolata, acuta; inflorescentia 1–2-flora; sepalum dorsale lanceolatum, acutum; sepala lateralia similia; petala oblanceolata, acuta; labellum trilobatum, anguste rhombicum, lobis lateralibus parvis, lobo medio lanceolato.

A much branched epiphytic herb with a number of stems from a common base. Stems multiarticulate and branched, indurated but not greatly thickened, the segments 1–2.5 cm. long, the older ones often with the shredded remains of the old leaf-bases, yellow in color,—the younger parts of the stem covered with the leaf-sheaths, not greatly thickened; leaves lanceolate, acute, thin, several-nerved, 2.5–6 cm. long, 3–7 mm. broad, articulated to the striated sheaths which invest the stem; inflorescence of but one or two flowers; bracts hyaline, lanceolate, about 2 mm. long; flowers medium-sized, about 15 mm. long including the mentum; dorsal sepal lanceolate, acute, 5-nerved, about 12 mm. long and 5 mm. broad; lateral sepals attached to the column-foot and with it forming a curved mentum which is 6–7 mm. long, free part of the blade lanceolate, acute, about 12 mm. long and 4–5 mm. broad; petals oblanceolate, acute, about 12 mm. long and 3–4 mm. broad; lip 3-lobed, narrowly rhombic in outline, about 18 mm. long and 8 mm. broad,—the lateral lobes small, near the middle of the

lip which is the broadest part,—margin of the lanceolate middle lobe often irregularly cut; column short, about 2 mm. long, stelidia erect.

MINDANAO: Todaya (Mt. Apo), District of Davao, August 1909, *Elmer 11502* (TYPE in Herb. Ames No. 44950).

The following field note, made by Mr. Elmer, accompanies the specimen:

"Small tufts upon limbs of trees on a very steep edge of the Cati Creek at 5750 feet of Mt. Apo. Stems quite rigid, descending, green and covered more or less with grayish marcescent sheaths, branched; leaves descending, flat, thickly coriaceous, the apex recurved, paler green beneath; flowers creamy white, pendulous, upon the leafless stalks.—Saromat-ta-cayo."

This species is rather an outstanding one. It seems to have no near allies either in the Philippines or elsewhere.

Dendrobium (Subg. Pedilonum) **serratilabium** *L. O. Williams, n. sp.*

Herba epiphytica cum caulibus usque ad 4 dm. longis. Caules multiarticulati, incrassati; folia lanceolata, acuta vel acuminata; inflorescentia brevis, pauciflora; sepalum dorsale late lanceolatum, acutum; sepala lateralia similia, mentum formantia; petala elliptico-lanceolata, acuta; labellum basi unguiculatum, lamina rotundata vel late subcordata, serrata vel lacerata; columna generis.

An epiphytic herb with stems up to 4 dm. long. Stems multiarticulate, thickened, much wrinkled (at least in dry material) the segments mostly 1.5–2 cm. long, the older ones often with the remains of the old leaf-sheaths, yellow in color, the younger (annual) part of the stem not much thickened and covered with the leaf-sheaths; leaves lanceolate, acute or acuminate, with about seven

prominent nerves, those known 6–8 cm. long and 1–1.5 cm. broad, articulated to the striated sheaths which loosely invest the stems; inflorescence short, apparently few-flowered and borne on the older (leafless?) part of the stem at an articulation; bracts lanceolate, acute, about 4–5 mm. long; flowers fairly large, probably white, including the mentum about 3.5 cm. long; dorsal sepal broadly lanceolate, acute, 7-nerved, joined at the base with the lateral sepals for about 1.5 mm., about 17 mm. long and 7 mm. broad; lateral sepals attached to the column-foot, free part of the blade broadly lanceolate, acute, 7-nerved, about 16 mm. long and 7 mm. broad, prolonged into a long mentum at the base which is closed almost to the column, mentum straight, slender, about 25 mm. long and 4 mm. broad near the middle; petals elliptic-lanceolate, acute, 5-nerved, about 16 mm. long and 7 mm. broad; lip long-clawed, the claw extending almost to the tip of the mentum, free portion of the claw linear, with a small recurved median callus near the base and two very small lateral lobes or teeth near the expanded portion of the lip, about 20 mm. long and 2 mm. broad,—expanded part of the lip rotund or broadly subcordate, the lateral margins cut with linear or lanceolate irregular teeth, about 10–12 mm. long and 14 mm. broad; column short, about 2 mm. long, stelidia erect, the lateral ones ovate, about 2 mm. long, the median one narrowly triangular, about 1 mm. long.

LUZON: Province of Rizal, Sept. 1909, *Loher s.n.*; Province of Rizal, Sept. 1909, *Loher 14709* (TYPE in Herb. Ames No. 44653); Province of Rizal, Sept. 1909, *Loher 14726 in part.*

In addition to the above specimens there is an unidentified slide in the glycerine collection in Herb. Ames which probably belongs to this species. It is *Elmer 17125* from Luzon but the corresponding specimen has not been located.

This species which has no very close allies among the Philippine Dendrobiums is easily distinguished by means of the broad, serrated blade of the lip. The species to which it seems most closely allied is *Dendrobium Lawesii* F. v. Müller of New Guinea.

Dendrobium (Subg. Dendrocoryne) **platycaulon** *Rolfe* in Kew Bull. (1892) 139.

This rare species, which has not been previously known from wild specimens, is now represented in Herb. Ames by the following specimens:

LUZON: Province of Rizal, Sept. 1909, *Loher 14586.*

MINDANAO: Lake Mainit, Province of Surigao, June 1909, *Loher s. n.*

Two other specimens which are not in condition for positive determination probably belong to this species.

BOHOL: in damp forest or tree trunk, Bilar, alt. 2000 ft., Oct. 9, 1923, *Ramos 3118.*

MINDANAO: on tree trunk, Mt. Tubuan, Zamboanga District, alt. 1200 ft., *Ramos & Edaño 36619.*

Dendrobium (Subg. Bolbodium) **microphyton** *L. O. Williams, n. sp.*

Herba epiphytica parva, repens, caulibus usque ad 10 cm. longis. Folia lanceolata vel elliptica, obtusa, apice obscure bilobata; inflorescentia uniflora; sepalum dorsale ovato-lanceolatum, acutum; sepala lateralia late ovata; petala lineari-oblonga, acuta; labellum oblongum, trilobatum, lobi laterales parvi, lobo medio bilobato et paulo incrassato; columna generis.

A small repent epiphytic or terrestrial herb with stems up to 10 cm. long or possibly longer. Pseudobulbs fusiform or ovoid, densely aggregated on the repent stem, 5–10 mm. long and 2–3 mm. thick; leaf one from the summit of each pseudobulb, lanceolate to elliptic,

obtuse, inconspicuously bilobed, narrowed to the base, coriaceous, 10–20 mm. long, 3–5 mm. broad; inflorescence 1-flowered, from the top or near the top of the pseudobulb, consisting of a flower a short pedicel and a bract which surrounds the pedicel; flowers small, white, 5–6 mm. long; dorsal sepal ovate-lanceolate, acute, 3-nerved, about 2.5 mm. long and 2 mm. broad; lateral sepals attached to the column-foot, extended into a short mentum at the base, blade broadly ovate, about 3 mm. long and 2.5 mm. broad; petals linear-oblong, acutish, 1-nerved, about 3 mm. long and 0.7–0.8 mm. broad; lip oblong in outline, 3-lobed, about 4.5 mm. long and 2 mm. broad, the lateral lobes small, very thin and inconspicuous,—the middle lobe bilobed and thickened; column, including the three erect stelidia, about 2 mm. long; column-foot finely crisped-pilose-pubescent near the column.

BOHOL: on the top of dry hill in forest, Demyao (Dimiao?), alt. 1000 ft., Sept. 20, 1923, *Ramos 14165* (TYPE in Herb. Ames No. 44725).

Dendrobium microphyton is a most distinct species with no close allies among the Philippine species of *Dendrobium*. It is apparently closely allied to *Dendrobium funiforme* Blume, a rare species known, according to published records, only from New Guinea. *Dendrobium funiforme* is known to me only from the descriptions and from Blume's figures (Rumphia 4 (1848) t. 193, 4, t. 1. 198D). The present species differs from *D. funiforme* in having a 3-lobed oblong lip, not an entire lanceolate one; it also seems to have a shorter mentum. Other differences in the petals and sepals are noticeable, as well as minor differences in the vegetative structure.